

Where in the World Is Fairfield County?

BY STEVEN P. LANZA

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which themselves are
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In the popular 1990s children's game show *Where in the World Is Carmen Sandiego*, teenaged contestants used their knowledge of geography, together with clues uncovered in each episode, to track down the criminal mastermind Carmen Sandiego and her henchmen, and to win valuable prizes. Like the elusive Carmen, Fairfield County Connecticut has posed a puzzle for economists: Is this southernmost swath of Connecticut best viewed as part and parcel of the state of Connecticut, or is it a world apart, with closer ties to the metropolitan New York City area?

Clues to this mystery take the form of recent demographic and economic statistics published by the U.S. Census Bureau and the Bureau of Economic Analysis (BEA). A technique called cluster analysis offers a way to sift through the evidence, to sort the counties in Connecticut and bordering states into groups that share similar statistical profiles, and to provide insight into the linkages that Fairfield County—and the state's other counties—have with their neighbors.

The results suggest that Fairfield County may indeed have more in common with other counties in New York and New Jersey than it does with its in-state brethren. But the cluster analysis knife cuts both ways, revealing close similarities between the remaining Connecticut counties and areas of both Massachusetts and Rhode Island.

FAIRFIELD IN PROFILE

Comprised of 23 towns in Connecticut's panhandle along Long Island Sound, Fairfield County is the state's richest and one of the wealthiest

in the nation. No wonder it's earned the moniker of Connecticut's "Gold Coast." According to Census Bureau estimates for 2004, 900,000 people, or more than a quarter of Connecticut's residents, call the area home, making it the most populous county in the state.

Fairfield also edges out New Haven and Hartford as the state's most urban county, with 96% of inhabitants living in urban areas. Though Fairfield County's population growth rate since 1990 has been only about average for the state, the county boasts the highest percentage of foreign-born residents, and houses the greatest share of residents who have migrated from other states in the U.S.

According to the American Community Survey, the county's median family income reached nearly \$82,000 in 2003, nearly \$12,000 above the median for the state as a whole. But in a testament to the ability of a relatively small number of high income earners to skew the average, Fairfield County's 2004 per capita income, pegged at \$63,000 by BEA, outstrips its nearest state rival, Hartford County, by more than \$20,000.

High incomes in Fairfield County help to bid the area's home prices far above the heights scaled elsewhere in the state. County residents reported a median value for an owner-occupied home of \$265,000 in the last Census, more than \$100,000 above the median in the state's second most expensive county, Middlesex. And the median annual property tax is also higher: \$3,900 in Fairfield compared with \$2,900 in next-highest Hartford and New Haven counties.

A key indication of the strength of the area's ties to metro New York: A greater share of Fairfield County's residents work out of state (13%) than for any other county in Connecticut. Windham comes close, at 11%, but the state's remaining counties all hew to about a 3% share. Fairfield residents are more apt to work in professional and business services, in finance, insurance and real estate, or in the information sector, than is the typical Connecticut worker. And Fairfield ranks last among Connecticut counties in the share of manufacturing workers.

MAKING A MATCH

Fairfield's profile highlights some key differences between that county and others in the state. But are the differences enough to make Fairfield analytically distinct from the rest of Connecticut? And why stop there? Might other counties in Connecticut bear a closer resemblance to their neighbors in surrounding states than they do to one another?

Cluster analysis allows one to sort items into groups with common characteristics and thus to provide some answers to such questions. The technique has myriad applications, from organizing and analyzing data in DNA experiments to making sense of consumer product marketing studies. The idea is to apply statistical algorithms to a set of data, dividing items—people, things, or in this case counties—into groups so the degree of association is strong for members of the same cluster but weak for members of different clusters. Cluster analysis can be very helpful in uncovering latent structures in complex data.

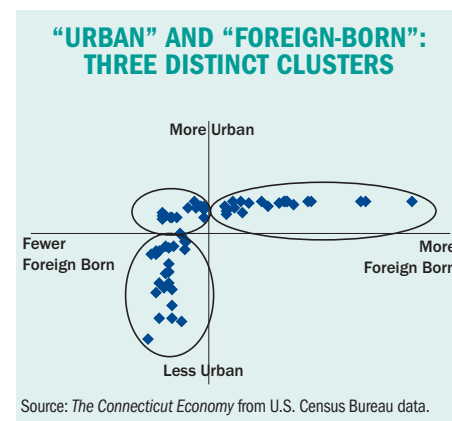
For a simple example, consider the scatterplot below of 60 counties in southern New York, northern New Jersey and southern New England. The counties are graphed along two dimensions: the share of the population living in urban areas, and the proportion of residents who are foreign-born. The counties appear to fall into three distinct clusters, encircled in the diagram: high-urban, high foreign-born; low-urban, low foreign-born; and low-urban, high-foreign born counties. Fairfield County falls into the high-urban, high-foreign born cluster—the only county in Connecticut to do so.

Unfortunately, measuring counties along just two dimensions (such as urban and foreign-born) doesn't provide a very comprehensive picture. More complete, multi-dimensional profiles, however, would quickly become graphically and analytically intractable. That's where cluster analysis comes in. Just as the scatterplot allowed us to group counties that were close together in two-dimensional space, cluster analysis allows us to group counties across many different dimensions.

The accompanying tree-diagram (overleaf) shows the result of clustering the same 60 counties using 31 separate variables, including geographic location and the population's place of birth, age, gender, race, education, housing, income, employment, and the commute to work.

Beginning at the tree's far right, each county starts as a "cluster" unto itself, but in a series of steps moving leftward, similar clusters are merged into ever larger clusters until, ultimately, all 60 counties form a single mass.

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THE KEY CLUSTERS

Results of the cluster analysis suggest that the 60 counties can be grouped into five broad clusters that form an urban hierarchy: large metros, large suburbs, small metros, small suburbs, and the Cape and Islands.

The large metropolitan counties form the most distinctive of the five clusters. Consisting of the counties in the cities of New York and Boston, the large-metro cluster does not feature a Connecticut member. Counties in this slow-growing cluster are, naturally, more urban than most, and residents tend to be younger, female, non-white and low-income. Families are relatively large, residents rent rather than own their own homes, and workers have long commutes to their jobs, located disproportionately in the information and finance, insurance and real estate (FIRE) sectors.

At the opposite end of the spectrum sit the Cape and Islands. As a vacation retreat, this cluster sports a relatively high share of jobs in the arts and entertainment industry. Decidedly

less urban, the Cape and Islands are nevertheless a leader in population, job and income growth. Residents tend to be older, white, and higher-income. Families are small, own their homes and live close to work. Connecticut fails to post a representative to this cluster, as well, although New London County, the state's backyard tourist destination, shares many common characteristics.

Fairfield County occupies a prominent position in the third cluster of counties, the large, wealthy suburbs surrounding the cities of New York and Boston. Highly educated residents, many of them non-natives, earn healthy incomes, work disproportionately in the fields of information, professional and business services, and FIRE, and have lengthier commutes to their jobs than most, often crossing state lines. They own expensive homes, but they also pay hefty property tax bills for that privilege.

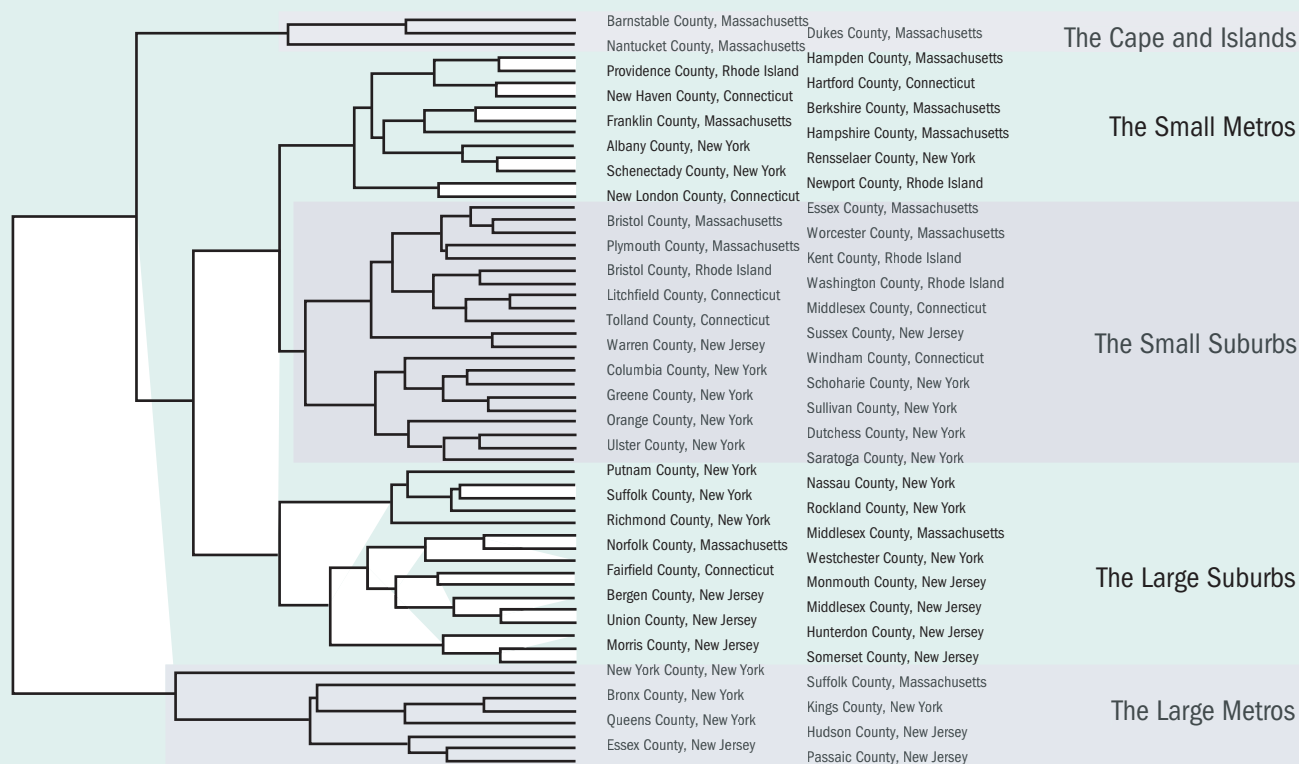
Though this description fits Fairfield fairly well, the county does evince some key differences from oth-

ers in the cluster. Fairfield residents are more likely to have been born out of state, but they're also more liable to now work out of state, too. Income growth is faster, but housing is more costly. And despite the grouching about taxes and transportation, Fairfield residents pay lower property taxes than do others in the cluster, and fewer of them face long commutes to and from work.

Connecticut's other counties fall into one or the other of two remaining clusters: the small metros and the small suburbs. Hartford, New Haven and New London counties, home to small cities of the same names, share major similarities with the counties that are home to the cities of Providence (RI), Springfield (MA), and Albany, Schenectady, and Troy (NY).

Employment in the small-metros cluster is concentrated in education and health (especially in New Haven), arts and entertainment (particularly in New London), or in public administration. There are fewer minorities (excepting Hartford) but more women (save New London) than average.

SOUTHERN NEW ENGLAND AND METRO NEW YORK AND NEW JERSEY CLUSTER WITHIN A REGIONAL HIERARCHY



Source: *The Connecticut Economy* based on data from the U.S. Census Bureau and the Bureau of Economic Analysis.

Both job and population growth are sluggish. Taxes are low, but so too are property values and incomes—though less so in Connecticut than elsewhere.

The last cluster, the small suburbs, displays a quintessentially blue-collar cast. Connecticut's four remaining counties—Litchfield, Middlesex, Tolland and Windham—fall into this group. For the cluster as a whole, residents are largely white, native-born, less likely to hold graduate degrees, more apt to work in the manufacturing sector (often in another county), and lower-income. And both home prices and taxes are relatively reasonable.

But the pattern fits Connecticut counties less well than others in the cluster. Residents of Middlesex and Tolland are more likely than average to hold a graduate degree. And incomes are higher there, too, and in Litchfield County as well. Manufacturing is more dominant in Connecticut's counties than it is clusterwide. And the heavy concentrations of FIRE employment in Litchfield, FIRE and education/health work in Tolland, and education/health and arts & entertainment in Windham are unusual for the cluster.

THE GEOGRAPHIC PATTERN

Cluster analysis produces a grouping of counties that exhibits a clear functional hierarchy, from the most crowded cities, to the sparsest hinterland. But these clusters are not distributed randomly across some featureless plain; they exhibit a clear geographical pattern.

Atop the hierarchy rest the international port cities of New York and Boston and the counties that quarter them, the largest and 24th largest cities in the country. In a ring of bedroom counties surrounding these urban behemoths are the large suburbs, with Fairfield among them. The similarity in occupational concentrations of these cities and their environs (FIRE, information, and professional jobs), the high inter-county commuting rates

in the New York suburbs, and the regularity of inter-state jaunts originating in Connecticut and New Jersey offer clues to the strength of the economic linkages between these clusters.

The small cities and their suburbs offer a variation on this theme, played out across four states. Small inland cities first joined by major rivers, and now connected by interstates, form a band that runs north along the Connecticut river and I-91, turning west along I-90 to Albany. Commuting patterns reinforce the notion that the clusters spill across state borders. For example, a relatively large number of residents in Hampden County, MA (Springfield), work out of state, most likely in the Hartford area.

Woven around this swath of cities is the cluster of small suburbs that also crosses state lines. And the evidence hints that residents do, too. After Fairfield County, people living in Windham County are more likely to travel out-of-state for work, to the Providence or greater Boston areas.

If national borders are insufficient to contain the spread of economic globalization, it's no surprise that cluster analysis should show that economies are not easily corralled by state boundaries either. That's true in Fairfield County and elsewhere.

SO FAR, AND YET SO CLOSE

Still, the analysis confirms conventional wisdom. Fairfield County seems to share a greater affinity with suburban New York and New Jersey than with the rest of Connecticut. But does that make Fairfield a breed apart? Not necessarily. The correlation coefficient for Fairfield and Hartford counties on the 31 metrics included in this study is 0.36 (1.00 would mean the two were identical, -1.00 polar opposites, and 0.00 unrelated). That's a tighter association than that between Fairfield and more than a third of its companion counties in the large suburban cluster.

Equally important, Fairfield is, by choice, politically linked to the rest of Connecticut and shares a common his-

tory and government structure. During the colonial period, Connecticut's panhandle was the subject of protracted territorial disputes between New York and Connecticut. The matter was resolved by treaty in 1683, and at the insistence of local residents what is now Connecticut's Gold Coast became part of the Nutmeg State. And there it remains—a county whose roots burrow deep into Connecticut but whose branches extend as far as New York and New Jersey.

